

## ABSTRACT

An electronic ballast includes a rectifier and filter circuit, a DC/AC inverter circuit and a resonant circuit. An input of the rectifier and filter circuit is connected to an outside power supply, its output is connected to the inputs of DC/AC inverter circuit, an output of the DC/AC inverter circuit is connected to inputs of the resonant circuit, and an output of the resonant circuit is connected to a lamp. In addition, a feedback driver circuit and a filament current loop are connected to the lamp at its input. An input of the feedback driver circuit is connected to the filament current loop, and its output is connected to the control terminal of the DC/AC inverter circuit. Electrical signals of the filament current loop control the DC/AC inverter circuit drive the resonant circuit through the feedback driver circuit. The filament capacitor is disconnected from the lamp when the filament is broken.